48304.tm.r1:

5'-GC CAGGCTATGA GGCTCCTT-3' (SEQ ID NO:568)

PRO531 (DNA48314-1320):

48314.tm.f1:

5'-TTCAAGTTCCTGAAGCCGATTAT-3' (SEQ ID NO:569)

48814.tm.p1:

5'-CCAACTTCCCTCCCCAGTGCCCT-3' (SEQ ID NO:570)

48814.tm.r1:

5'-TTGGGGAAGGTAGAATTTCCTTGTAT-3' (SEQ ID NO:571)

PRO618 (DNA49152-1324):

49152.tm.f1:

5'-CCCTTCTGCCTCCCAATTCT-3' (SEQ ID NO:572)

49152.tm.p1:

5'-TCTCCTCCGTCCCCTTCCTCCACT-3' (SEQ ID NO:573)

49152.tm.r1:

5'-TGAGCCACTGCCTTGCATTA-3' (SEQ ID NO:574)

PRO772 (DNA49645-1347):

49645.tm.f2:

5'-TCTGCAGACGCGATGGATAA-3' (SEQ ID NO:575)

49645.tm.p2:

5'-CCGAAAATAAAACATCGCCCCTTCTGC-3' (SEQ ID NO:576)

49645.tm.r2:

5'-CACGTGGCCTTTCACACTGA-3' (SEQ ID NO:577)

49645.tm.f1:

5'-ACTTGTGACAGCAGTATGCTGTCTT-3' (SEQ ID NO:578)

49645.tm.p1:

5'-AAGCTTCTGTTCAATCCCAGCGGTCC-3' (SEQ ID NO:579)

49645.tm.r1:

5'-ATGCACAGGCTTTTTCTGGTAA-3' (SEQ ID NO:580)

PRO703 (DNA50913-1287):

50913.tm.f1:

5'-GCAGGAAACCTTCGAATCTGAG-3' (SEQ ID NO:581)

50913.tm.p1:

5'-ACACCTGAGGCACCTGAGAGAGGAACTCT-3' (SEQ ID NO:582)

50913.tm.r1:

5'-GACAGCCCAGTACACCTGCAA-3' (SEQ ID NO:583)

PRO792 (DNA56352-1358):

56352.tm.f1:

5'-GACGGCTGGATCTGTGAGAAA-3' (SEQ ID NO:584)

56352.tm.p1:

5'-CACAACTGCTGACCCCGCCCA-3' (SEQ ID NO:585)

56352.tm.r1:

5'-CCAGGATACGACATGCTGCAA-3' (SEQ ID NO:586)

PRO474 (DNA56045-1380):

56045.tm.f1:

5'-AAACTCCAACCTGTATCAGATGCA-3' (SEQ ID NO:587)

56045.tm.p1:

5'-CCCCCAAGCCCTTAGACTCTAAGCCC-3' (SEQ ID NO:588)

56045.tm.r1:

5'-GACCCGGCACCTTGCTAAC-3' (SEQ ID NO:589)

PRO274 (DNA39987-1184):

39987.tm.f:

5'-GGACGGTCAGTCAGGATGACA-3' (SEQ ID NO:590)

39987.tm.p:

5'-TTCGGCATCATCTCTTCCCTCTCCC-3' (SEQ ID NO:591)

39987.tm.r:

5'-ACAAAAAAAAGGGAACAAAATACGA-3' (SEQ ID NO:592)

PRO381 (DNA44194-1317)

44194.tm.f :

5'-CTTTGAATAGAAGACTTCTGGACAATTT-3' (SEQ ID NO:593)

44194.tm.p:

5'-TTGCAACTGGGAATATACCACGACATGAGA-3' (SEQ ID NO:594)

44194.tm.r:

5'-TAGGGTGCTAATTTGTGCTATAACCT-3' (SEQ ID NO:595)

44194.tm.f2:

5'-GGCTCTGAGTCTCTGCTTGA-3' (SEQ ID NO:596)

44194.tm.p2:

5'-TCCAACAACCATTTTCCTCTGGTCC-3' (SEQ ID NO:597)

44194.tm.r2:

5'-AAGCAGTAGCCATTAACAAGTCA-3' (SEQ ID NO:598)

PRO717 (DNA50988-1326):

50988.tm.f3:

5'-CAAGCGTCCAGGTTTATTGA-3' (SEQ ID NO:599)

50988.tm.r3:

5'-GACTACAAGGCGCTCAGCTA-3' (SEQ ID NO:600)

50988.tm.p3:

5'-CCGGCTGGGTCTCACTCCTCC-3' (SEQ ID NO:601)

PRO1330 and PRO1449 (DNA64907-1163 and DNA64908-1163, respectively):

30943.tm.f3:

5'-CGTTCGTGCAGCGTGTGTA-3' (SEQ ID NO:602)

30943.tm.p3:

5'-CTTCCTCACCACCTGCGACG GG-3' (SEQ ID NO:603)

30943.tm.r3:

5'-GGTAGGCGGTCCTATAGATGGTT-3' (SEQ ID NO:604)

30943.tm.f1:

5'-AGATG TGGATGAATG CAGTGCTA-3' (SEQ ID NO:605)

30943.tm.p1:

5'-ATCAACACCGCCGGCAGTTACTGG-3' (SEQ ID NO:606)

30943.tm.r1:

5'-ACAGAGTGTACCGTCTGCAGACA-3' (SEQ ID NO:607)

30943.3trn-5:

5'-AGCCTCCTGGTGCACTCCT-3' (SEQ ID NO:608)

30943.3trn-probe:

5'-CGACTCCCTGAGCGAGCAGATTTCC-3' (SEQ ID NO:609)

30943.3trn-3:

5'-GCTGGGCAGTCACGAGTCTT-3' (SEQ ID NO:610)

The 5' nuclease assay reaction is a fluorescent PCR-based technique which makes use of the 5' exonuclease activity of Taq DNA polymerase enzyme to monitor amplification in real time. Two oligonucleotide primers (forward [.f] and reverse [.r]) are used to generate an amplicon typical of a PCR reaction. A third oligonucleotide, or probe (.p), is designed to detect nucleotide sequence located between the two PCR primers. The probe is non-extendible by Taq DNA polymerase enzyme, and is labeled with a reporter fluorescent dye and a quencher fluorescent dye. Any laser-induced emission from the reporter dye is quenched by the quenching dye when the two dyes are located close together as they are on the probe. During the amplification reaction, the Taq DNA polymerase enzyme cleaves the probe in a template-dependent manner. The resultant probe fragments disassociate in solution, and signal from the released reporter dye is free from the quenching effect of the second fluorophore. One molecule of reporter dye is liberated for each new molecule synthesized, and detection of the unquenched reporter dye provides the basis for quantitative interpretation of the data.